BRUHAT BANGALORE MAHANAGARA PALIKE

YALAHANKA PROJECTS DIVISION

NAME OF WORK: Construction of Compound gate to Mini Vidhana soudha and Construction of Auditoriums in Government first grade college and Bangla Government Higher Primary school and other developmental works in Kempegowda ward No. 01

BAR CHART

Sl No	Description of Work	Unit	BOQ Quantity	EXE Quantity	May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21
1	Dismantling (By Mechanical means) of existing stage and surrounding structure comprising of masonry, cement concrete, wood work, steel work including T&P and scaffolding wherever necessary, sorting the dismatled material, disposal of unserviceable material and stacking the servicable material with all lead, lifts, loading and unloading complete as per direction of Engineer in charge.KSRB M200-14.2	Cum	59.52	59.52						
2	Earthwork excavation by manual means for foundations, either in pits or trenches 1.5m and above in width, in soil not exceeding 1.5m, in depth including dressing the bottom and sides of pits and trenches , stacking the excavated soil clear from edges from edges of excavation with lead upto 50m, including breaking of clods complete as per specification in hard soil.KSRB 2-1	Cum	1754.29	1754.29						
7	Providing and laying in position plain cement concrete of mix 1:4:8 with OPC @ 180 kgs, with 40mm and down size graded granite metal coarse aggregates @ 0.85 cum and fine aggregates @ 0.57 cum machine mixed, machine mixed, concrete laid in layers not exceeding 15cms. thick, well compacted, in foundation, including cost of all materials, labour, HOM curing complete as per specifications. Specification	Cum	79.33	79.33						
8	KSRB 5.2-3 : Providing and constructing granite / trap / basalt size stone masonry in foundation with cement mortar 1:6, stone hammerd dressed in courses not less than 20 cms high, bond stones at two m. apart in each course including cost of materials, labour, curing complete as per specifications. KBS 5.1.13	Cum	151.65	151.65						
9	KSRB 5.3-3 : Providing and constructing granite / trap / basalt size stone masonry in basement with cement mortar 1:6, edges of stones chistle dressed in courses not less than 15 cms high, bond stones at two m. apart in each course including cost of materials, labour, curing complete as per specifications. KBS 5.1.13	Cum	95.66	95.66						
10	KSRB 15.1 Providing flush pointing 20 mm deep to square rubble, course or uncoursed stone masonry with cement mortar after rakingvjoints to depth of 20mm nicely lining, including cost of materials, labour,vcuring complete as per specifications	Sqm	334.35	334.35						

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Project Division
Yelahanka Zone
BBMP, Bangalore - 92

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11	KSRB 4.1.6 : Providing and laying in position reinforced cement concrete of design mix M15 with OPC cement @ 240kgs, with 20mm and down size graded granite metal coarse aggregates @ 0.878cum and fine aggregates @ 0.459cum, with superplastisiser @ 3lts confirming to IS9103-1999 Reaffirmed-2008, machine mixed, concrete laid in layers not exceeding 15 cms thick, vibrated for all works in foundation plinth and ground floor level for roof slabs, staircase, lintles, retaining walls, return walls, walls (any thickness) including attached pilasters, columns, piers, abutments, pillars, posts, struts, buttresses, string or lacing courses, parapets,coping, bed blocks, anchor blocks, plain window cills, fillets etc., including cost of all materials, labour, HOM of machinery, curing, complete as per specifications. Specification No. KBS 4.1, 4.6	Cum	26.57	26.57	
13	KSRB 4-6.1: Providing and removing centering, shuttering, strutting, propping etc., and removal of form work for foundations, footings, bases of columns for mass concrete including cost of all materials, labour complete as per specifications. Specification No.KBS 4.6.2	Sqm	280.04	280.04	
15	KSRB 5-14 : Providing and constructing precast concrete solid blocks with compressive strength not less than 3.5 Newton per sqm with cement mortar 1:4 masonry (quoin, Jamb, closer blocks) with solid concrete blocks of size 40x15x20cms conforming to I.S: 2185/1965 in superstructure including cost of materials, labour charges, scaffolding, curing complete as per specifications.	Sqm	223.84	223.84	
16	KSRB 4.9.2 : Providing T.M.T steel reinforcement for R.C.C work including straightening, cutting, bending, hooking, placing in position, lapping and / or welding wherever required, tying with binding wire and anchoring to the adjoining members wherever necessary complete as per design (laps, hooks and wastage shall not be measured and paid) cost of materials, labour, HOM of machinery complete as per specifications. Specification No. KBS 4.6.3 - TMT bars Fe 500	Mtonne	7.13	7.13	
17	Providing 18mm thick cement plaster in single coat with cement mortar to brick masonry incluing rounding off corners wherever required smooth rendering, Providing and removing scaffolding, including cost of materials, labour, curing complete as per specifications. Cement Mortar 1:4.KSRB 6-6.3	Sqm	512.76	512.76	
18	KSRB 14.5 : Providing and laying flooring and steps fine machine polished granite stone slabs 20 mm thick on cement mortar bed 1:6, 20 mm thick, and joints finished with cement mortar 1:3 over existing cement concrete bed , including cost of materials, labour, curing complete as per specifications. Specification No. KBS 14.26	sqm	237.66	237.66	

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Asst. Executive Engineer
Project Division
Yelahanka Zone
BBMP, Bangalore - 92

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Dear Sir,

This is to certify that all the items of ... as per details below

20	Providing and installing of pre painted Galvolume iron Trapezoidal profiled sheet of approved make 1060 mm width (1000 mm cover width), 28-30 mm crest height with crest distance of 200 mm c/c with 2 ribs at the centre for stiffening. The Total Qty coated thickness (TCT) of the sheet will be 0.47 mm +/- 0.02 mm tolerance Zinc-Alu Alloy coating AZ150 gsm as per ASTM 1397 / A755-550 mpa steel grade, 5-7 microns epoxy Sqm 573.00 299	sqm	445.88	445.88	
23	KSRB 14.6-1: Providing & laying heavy duty cobble stones 60mm thick interlock pavers,using cement & course sand for manufacture of blocks of approved size shape and colour with a minimum compressive strength of 281 kg per sqm over 50mm thick sand bed (Avg thickness) and compacting with plate vibrator having 3 tons compaction force thereby forcing part of sand underneath to come up in between joints, final compaction of paver surface joints into its final level, including cost of materials, labour and HOM of machineries complete as per specifications. Specification No. KBS	cum	372.00	372.00	
24	Providing and fixing pre cast solid cement concrete kerb stones made out of C.C. 1:2:4 with top and bottom width 114 and 165 mm respectively, 400mm high and 450mm in length finished with CM 1:3 plastering and finishing cutting, including form work, curing, including cost of all materials, labour, hire charges of machinery, loading, unloading, lead and lift, transportation etc., complete.	No's	959.00	959.00	
25	KSRB 800-1. Painting two coats after filling the surface with synthetic enamel paint in approved shades on new plastered concrete surfaces, with materials, labour complete as per specifications. MORTH Chapter 8	Sqm	130.00	130.00	
26	KSRB 4.2.2 : Providing and laying in position reinforced cement concrete of Design Mix M20 with OPC @ 320kgs. with 20mm and down size graded granite metal course aggregates @0.69cum and fine aggregates @ 0.460 cum, with super plasticisers @ 3 liters confirming to IS 9103-1999 reaffirmed-2008, machine mixed, concrete laid in layers not exceeding 15 cms thick, vibrated for all works in foundation for footings, pedestals, retaining walls, return walls, walls (any thickness) including attached pilasters, columnspillars, posts, struts, buttresses, bed blocks, anchor blocks & plinths etc., including cost of all materials, labour, HOM curing, complete but excluding cost of reinforcement as per specifications. Specification No. KBS 4.1, 4.6	Cum	134.16	134.16	

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27	KSRB 4.2.8: Providing and laying in position reinforced cement concrete of design Mix M20 with OPC @ 320kgs, with 20mm and down size graded granite metal coarse aggregates @0.69cum and fine aggregates @ 0.46cum, with superplastisiser @3lts confirming to IS9103-1999 Reaffirmed-2008, machine mixed, concrete laid in layers not exceeding 15 cms thick, vibrated for all works in ground floor level for roof slabs, staircase, lintels, and beams retaining walls, return walls, walls (any thickness) including attached pilasters, columns,pillars, posts, struts, buttresses, string or lacing courses, parapets, coping, bed blocks, anchor blocks, plain window cills, fillets etc., including cost of all materials, labour, HOM curing, complete but excluding cost of reinforcement as per specifications. Specification No. KBS 4.1, 4.6	Cum	13.50	13.50	
28	Fabrication supplying and erecting M.S. tubular trusses of all spans as per approved drawing & design with prefabricated steel applications using quality material and are durable, reliable and corrosion and abrasion resistant. Welding shall confirm to latest structural welding code. Quality shall be on various parameters like shape, size, design gauge and polish. The entire trusses is anchored in RCC column by using 4 nos of M.S. anchor bolts at each support with 10mm thick base plate and shoe plate. The work includes cutting, straightening, placing in position of M.S. pipes and welding wherever necessary and applying one coat of redoxide primer coat to all the members including cost of all materials, labour charges, and hire charges of machineries for cutting, welding, grinding and erection equipments, with all lead and lift, transportation, letc., complete as per specification	Kg	10312.16	10312.16	
29	KSRRB M200-13.1. Dismantling of existing structures like culverts, bridges, retaining walls and other structure comprising of masonry, cement concrete, wood work, steel work, including T&P and scaffolding wherever necessary, sorting the dismantled material, disposal of unserviceable material and stacking the serviceable material with all lifts complete as per specifications. II. By Mechanical Means. A. Cement Concrete Grade M-15 & M-20. MORTH Specification No. 202.	CUM	111.43	111.43	
30	KSRB 5.2-3 : Providing and constructing granite / trap / basalt size stone masonry in foundation with cement mortar 1:6, stone hammerd dressed in courses not less than 20 cms high, bond stones at two m. apart in each course including cost of materials, labour, curing complete as per specifications. KBS 5.1.13	Cum	62.33	62.33	

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31	Fabricating, providing and erecting in position of MS Hot Dip Galvanized Sq. Hallow Poles of 132 x 132 Heavy gauge of length 3000mm with MS Hot dip galvanized grill work as per approved design and drawing of chief architect. Using 125/75mm galvanized flat for alround frame and 20mm x 20mm galvanized forged design with square for for vertical at 150mm C/C as shown in the drawing including providing forged ornamental arrow head in top and bottom. The work is inclusive of troughing flat square rods, placing welding all the joints including grinding, finishing 2 coats of anticorrosive paint over one coat of metal primer. The rate is inclusive of all materials like MS, Hollow galvanized pipe, flats, forged square rods, cost of labour for all items of work cost painting, welding, cutting, grinding with all lead and lift as per specification including loading and unloading with cost and conveyance of all materials, labour, machinery and incidental charges for the successful completion of the work as per the direction Engineer-in-charge of the work.	Sqm	173.87	173.87	
32	Fabricating, providing and erecting in position Hot dip galvanized Gate, Using 72 x 72 x 4.8mm Sq. GI Pipe frame with top pipe bending in heavy duty hydraulic press with sand packing and hot bending to form double arch as per drawing profile, 20mm hot dip galvanized sq. rod for verticals at 150mm c/c as shown in the drawing including providing hot dip galvanized forged ornamental design in between rods and heads at top, middle and bottom. Intermediate supports of 75x12mm and 50X6mm arch bent to hot dip galvanized flats the work is inclusive of troughing GI. flat GI Sqm. rods, placing, welding all the joints including grinding, finishing metal paty, painting two coats enamel painting. The rate is inclusive of all materials like GI Pipe, GI Forged fadgets etc, heavy duty hinges are made out of 75mm solid sq. block assembled with 20mm dia bearing in three places for each flap. Heavy duty locking arrangement at five places including cost of labour, painting, erection charges using hand pulley crane with all lead and lift, loading, transportation, unloading, scaffolding charges and all other incidental charges for successful completion of the work as per direction of the Engineering	Sqm	36.55	36.55	
49	Fabricating supplying and mounting MS box made out 16WG suitable for floor/ wall mounting, fully weather proof with provision to enter heat dissipation, provided with hinged front cover, equipped with tamper proof locking arrangements, with suitable size clamps with necessary cable entry pipe with gland and lock and key should be finished with 2 coats of red oxide primer paint and finally finished with approved colour enamled metal paint etc. complete (49/6.40 (a) 14350)	Sq cm	2880.00	2880.00	
82	Supplying and fixing miniature circuit breakers on existing MCB distribution board using necessary fixing materials and 1 Type curve, Isolator (SP/DP, energy curve 3 with short circuit breaking capacity of 10KA and complete wiring as required (49/6.16) a) 32Amps SP (only A)	Each	3.00	3.00	
83	Granite stone pillar (Height including fixing, crane and transportation charges etc. (Approved Data Rate)	Nos	13.00	13.00	
83	Granite stone base block (with fixing and transportation charges etc. (Approved Data Rate)	Nos	13.00	13.00	

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E3	KSRB 15-16.1 : Providing and finishing external walls in two coats with waterproof cement paint of approved brand and shade to give an even shade after throughly brooming the surface to remove all dirt and loose powdered material, free from mortar drops and other foreign matter cost of materials, labour, complete as per specifications. - with primer. (P.No-120,I No-15.53.2)	Sqm	512.76	512.76	
E4	14.55, Providing full nosing for 20 mm thick granite slab using required machinery including cost and conveyance of all materials, labour for all items of work, HOM of equipment etc., complete as per specification	RMT	120.00	120.00	
E5	Providing and fixing RCC precast cover slab of 100mm thick for drain in cement concrete 1:1.5:3 using graded granite jelly 20mm and down size with steel reinforcement, including form work, lift charges, curing and concrete finished surfaces on both sides etc, complete and as per drawing and the directions of Engineer in-charge. (Data Rate)	SQM	25.92	25.92	
E6	Providing and fixing RCC precast cover slab of 250mm thick made out of CC 1:2:4 and jelly 20mm and down size with steel reinforcement, including form work, lift charges, curing and concrete finished surfaces on both sides etc, complete and as per drawing and the directions of Engineer in-charge. (Data Rate)	SQM	25.20	25.20	
E7	KSRRB M400-17. Providing, laying, spreading and compacting cushed stone aggregates of granite / trap / basalt to wet mix macadam specifications including pre mixing the material with water at OMC in mechanical mix plant carriage of mixed materials by tipper to site, laying in uniform layers with paver in sub-base/base course on well prepared surface and compacting with vibratory roller to achieve the desired density complete as per specifications(P.No-155,I No-20.18)	Cum	84.05	84.05	
E8	KSRRB 13-9. Providing, and fixing to wall, celing, and floor, high dencity poly ethylene pipes of 6.00KGF/sqcm working pressure of outside diameter raising mains and exposed distrubution pipes with special flange, compression type fittings, wall clips, making good the wall, celing and floor, including cost of materiallabor charges, HOM, and testing complete as per specifications(P.No-96,I No-13.72)	RMT	363.00	363.00	
E9	6.4.1 Supplying, of 1.1KV LT UG cable XLPE or Heat resistant PVC insulated, PVC extruded inner sheath armoured UF LT Cable as per IS 1554(Part-I) or IS 7098 Part 1 Armouring Strip thickness in average +5% and resistivity 14ohms/kms (max) as per IS -3975, Electrical SR 2019-20	RMT	679.20	679.20	

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Asst. Executive Engineer
Project Division
Yelahanka Zone
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E10	Supply of LED pole mounting type post top lantern with pressure die cast aluminium housing body for optimal thermal dissipation. Lamp compartment comprising of anti glare clear diffuser with Injection moulded polycarbonate/ clear glass material, delivering superior light output. Rated life Burning Hrs 50000 hr@ Lumen Maintenance of 70%, CCT > 5500K, IP 66 optical and electrical compartment & impact resistance of complete luminaire > IK08. Power Factor>0.9 with mains, Surge Protection- Min 5KV along with Over voltage/Overload, short circuit/ miss-wiring protection. Compatible for pole mounting with outer dia of 40mm to 50mm. Universal Voltage driver to operate wide voltage range from 100V to 270V 50/60Hz application. Compliance to IS 10322/ IEC 60598, LM 79 & LM 80 Adherence with RoHS. UL approved MCPCB LED Efficiency>130 lm/w, nominal CRI >75. Luminaire manufacturer should have in- house facility accredited by NABL/CPRI & any Government certified agency & Design & Development facility certified by ISO 9001:2008. Housing with supplier word mark /name shall be Engraved / Embossing on the die cast housing/ Body part Warranty of 2 Years against any manufacturing defect working under standard	Nos	4.00	4.00	
E11	Supplying and Fixing of Ornamental/Designer Double arm Light Pole 6m Height with Streetlight luminaire with pressure die cast aluminium housing body for optimal thermal dissipation. (Data Rate)	Nos	8.00	8.00	
E12	Supply of LED Streetlight luminaire with pressure die cast aluminium housing body for optimal thermal dissipation. Lamp compartment comprising of anti glare clear diffuser with Injection moulded polycarbonate material, delivering superior light output Rated life Burning Hrs 50000 hr @ Lumen Maintenance of 70%, maximum light intensity should be between 60 degrees to 70 degrees. CCT > 5500K, IP66 optical and electrical compartment & impact resistance of complete luminaire > IK08. Power Factor >0.9 with mains, Surge Protection- Min 5KV along with Over voltage/ Overload, short circuit/ miss-wiring protection. Compatible for pole mounting with outer dia of 40mm to 50mm. Universal Voltage driver to operate wide voltage range from 100V to 270V 50/60Hz application. Compliance to IS 10322/IEC 60598, LM 79 & LM 80 Adherence with RoHS. UL approved MCPCB. Top access street light with single screw to ensure ease of maintenance at the sight site location with minimized minimal tools. LED Light fixture with .....W System Power consumption. LED Efficiency>130lm/w, nominal CRI >75. Luminaire manufacturer should have in-house facility accredited by NABL/CPRI & any Government certified	Nos	8.00	8.00	

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Asst. Executive Engineer
Project Division
Yelahanka Zone
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E13	Supply of LED Streetlight luminaire with pressure die cast aluminium housing body for optimal thermal dissipation. Lamp compartment comprising of anti glare clear diffuser with Injection moulded polycarbonate material, delivering superior light output Rated life Burning Hrs 50000 hr @ Lumen Maintenance of 70%, maximum light intensity should be between 60 degrees to 70 degrees. CCT > 5500K, IP66 optical and electrical compartment & impact resistance of complete luminaire > IK08. Power Factor >0.9 with mains, Surge Protection- Min 5KV along with Over voltage/ Overload, short circuit/ miss-wiring protection. Compatible for pole mounting with outer dia of 40mm to 50mm. Universal Voltage driver to operate wide voltage range from 100V to 270V 50/60Hz application. Compliance to IS 10322/IEC 60598, LM 79 & LM 80 Adherence with RoHS. UL approved MCPCB. Top access street light with single screw to ensure ease of maintenance at the sight site location with minimized minimal tools. LED Light fixture with .....W System Power consumption. LED Efficiency>130lm/w, nominal CRI >75. Luminaire manufacturer should have in-house facility accredited by NABL/CPRI & any Government certified	Nos	8.00	8.00	
E14	Supply of LED Disigner Bollard light fitting with pressure die cast aluminium housing body for optimal thermal dissipation. Lamp compartment comprising of anti glare clear diffuser with Injection moulded polycarbonate/clear glass material, delivering superior light output Rated life Burning Hrs 50000 hr @ Lumen Maintenance of 70%, CCT > 5500K, IP 66 optical and electrical compartment & impact resistance of complete luminaire > IK08. Power Factor >0.9 with mains, Surge Protection- Min 5KV along with Over voltage/Overload, short circuit/ miss-wiring protection. Universal Voltage driver to operate wide voltage range from 100V to 270V 50/60Hz application. Compliance to IS 10322/IEC 60598, LM 79 & LM 80 Adherence with RoHS. UL approved MCPCB, with 2 years Warranty against any manufacturing defect working under standard electrical condition. (Data Rate)	Nos	4.00	4.00	
E15	Supplying of recess mounting non integrated type Designer LED down light 15 to 18 W luminaire comprising of pressure decast/ extruded aluminium housing, with spring loaded false ceiling clamps, LED of Power/COB with CCT 6500 degree K, CRI> 70%. efficacy >100 lumen per watt, 120degree beam spread, life> 25000 burning hours and Compliance to IS10322/IEC 60598, LM 79 & LM 80. The lamp compartment is enclosed with anti glare opal diffuser which enhances the lighting level. LED's are driven by HF electronic driver integrated in a separate control gear assembly., with PF > 0.95, power loss should< 5% of lamp wattage, short circuit & open circuit protection to be integrated in the circuit, THD less than 20%, Life as per LM 79. The operating input voltage should be between 130 to 275 volts. BIS Approved and Tested by NABL/CPRI accredited laboratory with 2 years Warranty against any manufacturing defect working under standard electrical condition.. (Data Rate)	Nos	8.00	8.00	
E16	Supplying and fixing Microprocessor based Electronic timer (with contactor, Din Mounting using necessary bolts, nuts and washers etc., 1-120sec setting.(I No 5.47, Ele SR- 2019-20)	Nos	3.00	3.00	

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Project Division
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